ABSTRACT

The invention includes a treatment apparatus for treating fibrous cellulosic raw material suitable for use in a paper making plant comprising extracting means for extracting contrary material from the raw material, crushing means for crushing the raw material to remove nodes therefrom and splitting means for splitting the crushed raw material lengthways. A co-rotating twin screw conveyor is used to pulp the crushed material, the conveyor being divided up into a plurality of zones, means for inserting treatment materials into a least one zone and means for controlling the temperature and/or pressure of all of the zones. The black liquor effluent produced in the pulping process is treated in an apparatus comprising an evaporator for concentrating the liquor to 30-70% solids, a processing vessel for treating the concentrated liquor at a temperature of between 300-600°C, and a closed conveyor for transporting the concentrated liquor from the evaporator to the processing vessel in excess of 90°C. The invention also includes the method involved in using the above apparatus.